Regional risk assessment of the Japanese brown alga, Sargassum muticum, in Cherry Point, Washington

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The Japanese brown alga (Sargassum muticum) is a rapidly spreading non-indigenous seaweed, which has colonized various shorelines within the Strait of Georgia. There is much concern regarding the potential impacts of Sargassum muticum upon native intertidal organisms. Applying the Relative Risk Model developed by Landis and Wiegers (1997), we performed a regional risk assessment of S. muticum in the Cherry Point, Washington region. As a part of this risk assessment, we evaluated the risk of impacts to selected endpoints for current conditions as well as considered the possibility of future spread within the Cherry Point region. Critical considerations in performing a risk assessment of invasion by non-indigenous species include: 1)the life history of the organism and 2) the small and large scale dynamics of the system that influence the habitat suitability and patch dynamics of the organism, which in turn affect the success of invasion. Much uncertainty still remains concerning these dynamics and therefore, this risk assessment will help to identify areas of research that can alleviate this uncertainty.